DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-008858
Date Inspected: 02-Sep-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 645
OSM Departure Time: 1845
Location: Shanghai, China

CWI Name: Li Jia

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☐ No	☑ N/A

Bridge No: 34-0006
Component: OBG Trail Assembly

Summary of Items Observed:

On this day CALTRANS OSM Quality Assurance Inspector (QA) S. Manjunath. Math was present during the times noted above for observations relative to the work being performed.

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 2AW

This Quality Assurance (QA) Inspector witnessed final tension verification for Suspender Bracket at PP 14 Counter Weight Side for Segment 2AW. Inspected 10% on a random basis and found the tension to be in general compliance. Bolt sizes used were M24 x 75 RC Set# DHGM240020 and final torque required is 600 N-m, M24 x 85 RC Set# DHGM240015 and final torque required is 517 N-m and M27 x 85 RC Set# DHGM270001 and final torque required is 853 N-m . Manual Torque wrench is been used with Sr. No. XQ2-584.

Segment 5BW to 5CW

This Quality Assurance (QA) Inspector observed at Segment 5BW to 5CW Longitudinal Stiffeners Dimension being recorded as on dated by Ct Inspectors only.

Signed Off Green Tag's

This Quality Assurance (QA) Inspector witnessed final tension verification for following depicted locations.

Inspected 10% on a random basis and found the tension to be in general compliance.

At Segment 2AW at Panel Point 15 N(W) Lower Chevron Brace and Bolt Size used was M22 x 75 RC Set# DHGM220005 and final torque required was 473 N-m and Green Tag No. 307.

At Segment 2AW at Panel Point 15 N(W) Lower Chevron Brace and Bolt Size used was M22 x 70 RC Set# DHGM220020 and final torque required was 520 N-m and Green Tag No. 308.

At Segment 1BW at Panel Point 11 S(W) Lower Chevron Brace and Bolt Size used was M22 x 65 RC Set# DHGM220021 and final torque required was 520 N-m and Green Tag No. 306.

At Segment 3AW at Panel Point 19 N(W) Lower Chevron Brace and Bolt Size used was M22 x 70 RC Set# DHGM220020 and final torque required was 520 N-m and Green Tag No. 298.

At Segment 4AW at Panel Point 26 Suspender Bracket and Bolt Size used was M24 x 75 RC Set# DHGM240020 and final torque required was 600 N-m and Green Tag No. 299.

At Segment 4AW at Panel Point 26 Suspender Bracket and Bolt Size used was M24 x 85 RC Set# DHGM240015 and final torque required was 517 N-m and Green Tag No. 300.

At Segment 4AW at Panel Point 26 Suspender Bracket and Bolt Size used was M27 x 85 RC Set# DHGM270001 and final torque required was 853 N-m and Green Tag No. 301.

At Segment 2AE at Panel Point 16 Suspender Bracket and Bolt Size used was M24 x 75 RC Set# DHGM240020 and final torque required was 600 N-m and Green Tag No. 302.

At Segment 2AE at Panel Point 16 Suspender Bracket and Bolt Size used was M24 x 85 RC Set# DHGM240015 and final torque required was 517 N-m and Green Tag No. 303.

At Segment 2AE at Panel Point 16 Suspender Bracket and Bolt Size used was M27 x 85 RC Set# DHGM270001 and final torque required was 853 N-m and Green Tag No. 304.

At Segment 1BW at Panel Point 11 S(W) Lower Chevron Brace and Bolt Size used was M22 x 75 RC Set# DHGM220005 and final torque required was 473 N-m and Green Tag No. 305.

Segment 5BE to 5CE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Bottom Panel T-Ribs. The weld joint no. BP 165A – 001-020/022/024 and 025 welding was in progress. The welder is identified as 048801. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233-B-U2-F.

Segment 5BE to 5CE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Edge Panel to Edge Panel Cross Beam (CB) Side and Bike Path (BK) Side. The weld joint no. OBE 5-006 (CB Side) and OBE 5-010 (BK Side) welding was in progress. The welder is identified as 053609 and 220067. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233T.

Segment 5BE to 5CE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Bottom Panel T-Rib Web to Web. The weld joint no. BP 57A-001 – 24/22/26 and 28 and BP – 111A -001- 20/22 and 24 welding was in progress. The welder is identified as 048801. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233-B-U2-F.

Splice Plate Mis-Drilled Holes

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Web Plate “I” Rib face Strut Plate and relevant connect plate hole misaligned after trimming. The welding was in progress against the Critical Weld Repair B-CWR667 Rev.0. The welder is identified as 220063. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-FCAW-1G(1F)-Repair Mis-drilled Holes.

Segment 4BW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Side Panel to Side Panel (Counter Weight and Cross Beam Side) and Bottom Panel to Bottom Panel for all the Cracks found by MPT at hold back areas between PP 25 and PP26. The welding is being carried out against B-CWR 699 Rev.0 and noticed welding was in progress. The welder is identified as 067571. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-2G (2F)-Repair and WPS-345-SMAW-2G(2F)-FCM-Repair.

Segment 5AW to 5CW

This Quality Assurance (QA) Inspector observed at 5AW to 5CW from PP 29 to PP36 Lower and Upper Splice Plate to Box Section for Chevrons bolt installation was in progress.

Segment 5BW and 5CW

This Quality Assurance (QA) Inspector observed at 5BW to 5CW North (CW side) and South (CB Side) Edge Panel to Edge Panel Transverse welding was in progress.

Segment 5BW and 5CW

This Quality Assurance (QA) Inspector observed at 5BW to 5CW between PP 34 and PP 35 Bottom Panle to Bottom Panel T-Ribs Web CJP welding was in progress.

Segment 5AE and 5BE

This Quality Assurance (QA) Inspector observed at 5AE and 5BE from PP 29 to PP 32 weld connecting to Floor Beam Flange to Floor Beam for FL1 Paint removal by buffing in progress and removed areas MPT test by ABF QA was in progress.

Segment 5BE to 5CE

This Quality Assurance (QA) Inspector observed at 5BE to 5CE between PP 34 and PP 35 for Segment to Segment welded hold back area fillet welds grinding and T-Ribs to T-Ribs web CJP welded areas flush grinding was in progress.

CB4

This Quality Assurance (QA) Inspector observed inside CB4 Splice Plates drilling holes for connecting FL3 of Lift 5 (East and West Bound) was in progress.

Segment 2AW

This Quality Assurance (QA) Inspector observed at Segment 2AW hold back areas MPT test being performed by ZPMC QC.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer